

Application no.: 10/020,531

Docket no.: GTI-1180-CON1

AMENDMENT**In the claims**

Please cancel claims 5-6, 10-16, 21-22, 25-28, 31-33, and 35-37 without prejudice or disclaimer as provided below.

1. (currently amended) An electroporation apparatus comprising:
a catheter having at least one inflatable balloon portion;
proximal to the at least one inflatable balloon portion, at least one infusion opening in the catheter for introducing a composition containing a therapeutic agent into a vessel in a subject;
a first electrode on the catheter surface positioned adjacent to the infusion opening; and
a second electrode on the catheter surface positioned such that the infusion opening is disposed between the first electrode and the second electrode, wherein the second electrode is spaced a distance that allows an electric field to be generated when a voltage is applied between the first and second electrodes after the catheter has been inserted into the vessel, wherein the electric field is sufficient in strength to electroporate cells in the vessel.
2. (original) An electroporation apparatus according to claim 1 further comprising an electrical source connected to the first and second electrodes for applying a voltage between the electrodes.
3. (original) An electroporation apparatus according to claim 1, wherein the vessel is a blood vessel.
4. (original) An electroporation apparatus according to claim 1, wherein the first electrode is formed at least in part of biologically inert material.
- 5-6. (canceled)

Application no.: 10/020,531

Docket no.: GTI-1180-CON1

7. (original) An electroporation apparatus according to claim 1, wherein the catheter has two inflatable balloon portions.

8. (original) An electroporation apparatus according to claim 7, wherein the infusion opening is between the two inflatable balloon portions.

9. (original) An electroporation apparatus according to claim 1 or 8, wherein the first electrode is coincident with the infusion opening.

10-16. (canceled)

17. (currently amended) An electroporation apparatus for introducing a composition into at least one cell in a vessel in a subject comprising:

a catheter having at least one inflatable balloon portion at a position other than the distal end of the catheter;

proximal to the at least one inflatable balloon portion, an infusion opening in the catheter for introducing a composition containing a therapeutic agent into a vessel in a subject;

a first electrode on the catheter surface positioned adjacent to the infusion opening; and

a second electrode on the catheter surface positioned proximal to but spaced from the first electrode a distance that allows an electric field to be generated when a voltage is applied between the first and second electrodes after the catheter has been inserted into the vessel, wherein both the first and second electrodes are located proximal to the at least one balloon portion and the electric field is sufficient in strength to electroporate cells in the vessel.

18. (original) An electroporation apparatus according to claim 17 further comprising an electrical source connected to the first and second electrodes for applying a voltage between the electrodes in an amount sufficient to cause electroporation of at least one cell.

Application no.: 10/020,531

Docket no.: GTI-1180-CON1

19. (original) An electroporation apparatus according to claim 17, wherein the vessel is a blood vessel.

20. (original) An electroporation apparatus according to claim 17, wherein the first electrode is formed at least in part of biologically inert material.

21-22. (canceled)

23. (original) An electroporation apparatus according to claim 17, wherein the first electrode and the second electrode is each separately selected to be a single electrode or multiple electrodes.

24. (original) An electroporation apparatus according to claim 23, wherein the multiple electrodes are interdigitated electrodes or concentric ring electrodes.

25-28. (canceled)

29. (original) An electroporation apparatus according to claim 1 wherein the electric field strength is about 100 V/cm to about 5 kV/cm.

30. (original) An electroporation apparatus according to claim 1 wherein the voltage is about 10 volts to about 200 volts.

31-33. (canceled)

34. (original) An electroporation apparatus according to claim 17 wherein the voltage is about 10 volts to about 200 volts.

35-37. (canceled)